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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,556	08/06/2001	Yoshinori Abe	862.C2325	7056
5514	7590	03/14/2005		
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER DIVINE, LUCAS	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,556

Applicant(s)

ABE, YOSHINORI

Examiner

Lucas Divine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **107, 201, 202, 203, 204, 205, 206, 207, 208, 220, and S2.**
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: from Fig. 6 – **180, 110, 112, 114, 116, 118, 119, 120, 121, 126, 129, 130, 131, 132, 133, 134, 135, 136, 137, 139, 140, 141, 142, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162 and 162a** and from Fig. 9 – **S902.**

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

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3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 – 6, 11 – 13, 17 – 19, and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, claim 4 recites the limitation “**selecting and insufficient number of devices from among the devices in an energy saving state**”. Examiner does not understand what the ‘insufficient number’ is in relation to or how it is determined. It is unclear how the insufficient number is acquired and how it relates to the limitations further in the claim.

For example, if the insufficient number is an insufficient number of devices for the cluster operation, then if the required number for the operation was, for example, 8, the number of standby devices selected could be anywhere from 1-7. And if there were 5 devices in standby, anywhere from 6 devices to 12 devices would have the distribution step distribute a job to them, which either wouldn’t work (in the case where there is not enough devices) or it would be exact or it would be too many and power would be wasted by using devices not needed. Either way, 2 of the 3 outcomes does not perform the clustering operation correctly, so the claim is unclear and indefinite as to what an insufficient number is.

As a differing example, if the insufficient number is an insufficient number of devices in an energy saving state, to be clear on what is insufficient, the claim must be clear on what is a sufficient number. The claim effectively states, 'a selecting portion for selecting a number of devices less than some unknown sufficient number from among the devices in an energy saving state'. One of ordinary skill in the art would be unable to chose an insufficient amount of devices if one does not know what is a sufficient number of devices in an energy saving state. The number could be anything because it is not tied to the cluster operation in any way. Say the number of devices in stand-by is 5 again, the required number for the cluster operation is 8 and the total number of devices in an energy saving state is 140. The selecting portion could select any number of devices between 1 and 139 because each number is an insufficient number of the total devices in an energy saving state. Further, the insufficient number could be referring to some other type of meaning for 'sufficient' that is not discussed.

Thus, the claim is indefinite in regards to 'an insufficient number'. The claim does not particularly point out or distinctly claim what the applicant regards as the invention and is therefore rejected.

Regarding claims 11 and 17, these independent claims include the same 'insufficient number' and 'number of devices' language and are rejected for the same reasons as stated above in the rejection of apparatus claim 4.

Regarding claims 24 – 37, which depend from one of independent claims above, these claims inherit rejected limitations from their parent claims and therefore are rejected for the same reasons.

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5. Claims 21 – 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 21, claim 21 recites the limitation of ‘**determining whether or not the cluster operation is running**’ in order to determine whether or not to transfer into a sleep state. Examiner does not understand how then a device transfers to a sleep state (page 62 lines 4-5) if the cluster operation is running. As defined on page 36 of the spec lines 12-19, the cluster operation includes printing on a plurality of multi-function devices. It is unclear and indefinite how the device transfers into sleep state while it is including in the running operation (how a device can transfer to sleep state while printing information). Therefore, it is unclear and indefinite as to what the applicant is claiming in claim 21 and therefore the claim is rejected under 35 U.S.C. 112, second paragraph.

Note: page 45 lines 19-25 disclose the device transferring into sleep state after it is determined whether or not the device is incorporated into the cluster system, not while the cluster operation is running.

Regarding claims 22 and 23, these independent claims include the same ‘cluster operation is running’ language and are rejected for the same reasons as stated above in the rejection of apparatus claim 21.

Regarding claims 24 – 37, which depend from one of independent claims above, these claims inherit rejected limitations from their parent claims and therefore are rejected for the same reasons.

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6. Claims 30 – 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 30 – 32, which depend from apparatus claim 25, recite the limitation "**said determination step**" in, for example, page 65 line 6 and "**said state transfer step**" in, for example, lines 8 and 9. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 recites the limitation "**said restoring conditions**" in line 17 of page 60. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 14 – 19, 23, and 33 – 36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The computer program claimed is merely a set of instructions per se. Since the computer program is merely a set of instructions not embodied on a computer readable medium to realize the computer program functionality, the claimed subject matter is non-statutory. See MPEP § 2106 IV.B.1.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 – 3, 8 – 10, 14 – 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. (US 6650431) and Yamanaka (US 6268925).

Regarding claim 1, Roberts teaches **cluster printing in a control device** (Fig. 1, ref. no. 108) **for controlling a plurality of devices** (124, 126 as examples) **comprising a distribution portion for distributing a job to each device** (control station distributes parts of a job [see Fig. 4 for example of parts of the job sent to each device]), **if a sum of the number of devices in the stand-by state and the number of devices restored to the stand-by state by said restoring portion reaches said required number** (thus all devices are ready – it is suggested in the system of Roberts that the devices 124, 126 are ready to accept and print the job considering the job is sent to them for execution [steps 692 and 696]).

While Roberts teaches a cluster printing system, Roberts does not expressly teach a **restoring portion for restoring a device in an energy saving state to a stand-by state, if the number of devices in the stand-by state is smaller than a required number of devices for the cluster operation.**

Yamanaka teaches a **restoring portion** (wake-up command transmission section 72) **for restoring a device in an energy saving state to a stand-by state** (Fig. 4(A) teaches that if it is known that a device in a sleep mode will be needed in a certain period of time [S5], it automatically sends a wake-up command; S6) when the device is needed.

It would have been obvious to add sleep modes and the automatic awake therefrom as in the system of Yamanaka with the system of Roberts. The motivation for doing so would have been to save power in the devices that are not being used. Yamanaka further explains the benefits of a sleep mode in col. 1 lines 21-26. This would work well in the exemplified system of Roberts. In the example system of Roberts, the distributed cluster printing example is a color printer and a black and white printer. Thus, a lot of times, a color printer might not be needed and so it would be beneficial to have it go to sleep if it is not needed.

Thus, in the combined system of Roberts and Yamanaka, if the black and white printer is in a stand-by state and the color device is in energy saving state, **the number of devices in the stand-by state is smaller (1) than a required number of devices for the cluster operation (2)**, and therefore, the color device would need to be restored by the restoring portion to a stand-by state in order to complete the printing operation and then following the distributing would distribute when the number of stand-by devices is equal to the required number (2).

Regarding claim 2, which depends from claim 1, Yamanaka teaches the **restoring portion sets up a device restored from the energy saving state to the stand-by state in accordance with the specified restoring conditions** (restoring conditions shown in step S5 of Fig. 4(A), wherein the device is restored in accordance with the conditions).

Regarding claim 3, which depends from claim 2, Yamanaka teaches **restoring conditions include a warm-up time for the device to return to the stand-by state** (reference time is the time it takes for the printer to wake-up; col. 5 lines 35-40) , **and/or the last operation time and/or the functions provided for the device.**

Regarding claim 8, the apparatus elements of apparatus claim 1 perform all of the method steps of method claim 8. Therefore, method claim 8 is rejected for the same reasons as rejected apparatus claim 1 above.

Regarding claim 9, which depends from claim 8, the apparatus elements of apparatus claim 2 perform all of the method steps of method claim 9. Therefore, method claim 9 is rejected for the same reasons as rejected apparatus claim 2 above.

Regarding claim 10, which depends from claim 9, the apparatus elements of apparatus claim 3 perform all of the method steps of method claim 10. Therefore, method claim 10 is rejected for the same reasons as rejected apparatus claim 3 above.

Regarding claim 14, the method steps of method claim 8 are the same as the program steps of program claim 14. Further Yamanaka expressly discloses systems with processors 20, 50 and memories 52, 54, 22, 24 for performing program steps. Thus, the steps of program claim 14 are rejected for the same reasons as discussed in the rejection of method claim 8.

Regarding claim 15, which depends from claim 14, the method steps of method claim 9 are the same steps in the program claim 15. Thus, the steps of program claim 15 are rejected for the same reasons as discussed in the rejection of method claim 9.

Regarding claim 16, which depends from claim 14, the method steps of method claim 9 are the same steps in the program claim 15. Thus, the steps of program claim 15 are rejected for the same reasons as discussed in the rejection of method claim 9.

Regarding claim 20, which depends from claim 14, Yamanaka further teaches a **computer readable storage medium for storing computer program** (Fig. 2, ROM 22 or 52 or RAM 24 or 24).

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10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts and Yamanaka as applied to claim 1 above, and further in view of Yoshida et al. (US 6130757).

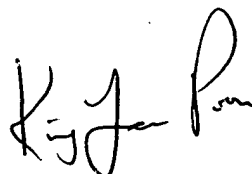
Regarding claim 7, which depends from claim 1, the combination of Roberts and Yamanaka teaches **performing the cluster operation under the control of said control device** (Fig. 1, see claim 1 rejection) with printing devices and thus does not specifically teach that the printing devices can be **multi-function devices**.

Yoshida teaches performing network printing with clients and servers with **multi-function devices** (Fig. 1, multi-function device 1; col. 4 lines 32-50).

It would have been obvious to one of ordinary skill in that art to include multi-function devices in a networked printing system (Fig. 1 of Yoshida). The motivation for doing so would have been to allow scanning, copying, facsimile and other types of jobs to be completed user or clustering operation.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US-5457516, Kim, 10-10-1995: teaches an energy saving image forming apparatus and control method therefor including allowing the user to send a command to put the device into energy saving mode that overrides the energy saving conditions.



KING Y. POON
PRIMARY EXAMINER

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 703-306-3440. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine
Examiner
Art Unit 2624

ljd